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ABSTRACT

The paper discusses the quality of working life (QWL) from the point of view of the individual worker as it is examined and reported in the literature from 1957 to 1972. The research for that time is characterized by large-scale, static investigations and shows increasing concern for the dignity of the individual. It was concluded that past research is deficient in intensive and systematic field investigations, particularly in measuring QWL in terms of behaviors. Wages, hours, physical working conditions, meaningful and satisfying work, social support, control and influence, career opportunities, and the relationship between work and other parts of employees' lives are concepts included in an enlarged definition of QWL. Eleven QWL criteria (alienation, health and safety, economic security, self-esteem, self-actualization, work environment, control and influence, organizational enclosure, career aspirations, and extra-work activities) were selected as major outcome variables to be studied which could be operationalized in behavioral terms while excluding attitudes per se. The state of the art is discussed in terms of time period, type of journal, and cross national research. (A sample of substantive searches using the bibliography index and relating any QWL criterion and specified correlate is included.) (AG)

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Concepts and Problems in Studies of the Quality of Working Life

by

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I. Introduction and Summary

This paper represents an attempt to describe and summarize conceptual thinking and empirical research on the issue of the quality of working life (QWL) during the fifteen-year period 1957-72. Also intended to be a companion piece to an annotated bibliography* the present paper describes the development of the classification scheme for QWL as used in the bibliography and in the present paper, describes the search and classification procedures developed, and provides an initial sample of the substantive findings. The term quality of working life, as used in the bibliography and in the present paper, refers primarily to the quality of working life from the point of view of the individual worker.

The past several years have been a period of significant demonstrations of growing governmental and public awareness of the quality

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*Taylor, J.C.; Landy, J.; Levine, M.; and Kamath, D.R., The Quality of Working Life: An Annotated Bibliography 1957-72, a research report to The Manpower Administration, U.S. Department of Labor (Los Angeles: Center for Organizational Studies, Graduate School of Management, University of California, 1973).

The bibliography reviews and abstracts what has been reported on several aspects of the quality of working life during this period. It was undertaken as the initial step in classifying empirical research dealing with the quality of working life as the phenomenological experience of people at work. The bibliography classifies such studies and is annotated to abstract the elements in the studies that deal with quality of working life. The specifics of the abstracts are indexed and cross-referenced in tables, enabling the user to locate pertinent or relevant information.

of working life: Senate hearings that led to the introduction of the first bill in recent years (S. 3916) to fund a study of worker alienation and further research on ways to reduce it; the Ford Foundation's sponsorship of an international conference of social scientists on the quality of working life and the effects of ongoing research and action projects; and efforts by business, government, and the social science to come to grips with the issues. Clearly, the time is right to review what social science has to offer in accumulated knowledge as a basis for further steps to improve the quality of working life.

Historically, the idea of quality of working life has included only the issues of wages, hours, and physical working conditions. These issues have been the prime concern of organized labor and have been well served by that concern. Wages, hours, and physical working conditions are still included in any definition of quality of working life, but the concept is expanding to include much more. An enlarged definition of quality of working life could include such elements as meaningful and satisfying work, social support (both in the work itself and for dealings with an impersonal organization), control and influence, career opportunities, and the relationships between work and other parts of employees' lives. Economists and physicians can tell us how much pay is a living wage, and how much noise or heat, or how many hours of work, the human body can take without damage. Yet we do not know how much worker influence, social support, or impact on other parts of employees' lives is enough (or too much) for a high quality of working life. It is clear however that we need to know more about these and other aspects of the quality of working life.

Industrial organizations are experiencing a phenomenon of worker alienation that results in high absence and turnover, even in tight job markets. Business also claims that those employees who are on the job and working are reluctant to work with the intensity or dedication that American management once believed it could expect from its workers. The interest of society in the broader implications of the quality of life is reflected in the concern of government for all aspects of its citizens' experiences--including work experiences. At the individual level, a current social trend toward personal freedom, on the job as well as off, has resulted in the employee's increasing demand for more relevance and involvement in his work.

Some scientific investigation preceded the contemporary developments described above. For example, social scientists have for some years been interested in work motivation, although in areas of societal and individual concern their studies have been less systematic. During the past two or three decades research in these areas has centered primarily on job satisfaction and has been directed toward increasing organizational productivity. Job satisfaction has been used and is still used as the primary criterion for the quality of working life as it is seen by the individual. However, attempts to assess the quality of jobs and work by means of surveys of the degree of job satisfaction have recently been called into question by the following condition: although job satisfaction statistics suggest that things are getting better all the time, absenteeism and turnover seem to be increasing.*

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*See Yankelovich, D. "The Meaning of Work" presented at the 43rd American Assembly, Columbia University, New York, November 1, 1973.

Although a review of research on job satisfaction, or on productivity, would be useful at this time, we decided to try another tack on the subject of the quality of working life. We undertook to assess the empirical research on behavioral rather than on attitudinal outcomes of the quality of working life.

To begin with, we presumed that to embrace the principal aspects of the quality of working life, such conventional elements as wages, hours, and working conditions must be joined with control and influence, social support, meaningful work, career prospects, and the impact of work on the total life of the individual. These additions seemed to cover the sorts of employee complaints we were hearing (and hearing about), and they also seemed to cover much of the recent social science research on job satisfaction and organizational productivity.

We were interested in these additional variables as they affect measurable behaviors (e.g., absenteeism), reported behaviors (e.g., coming to work early), or reported perceptions of behaviors (e.g., the behaviors of peers or superiors)--all in contrast to reported feelings or attitudes (e.g., satisfactions). If we were to study demonstrable relations between variables in the work setting and these criterion behaviors, then, whatever the results, we would come closer to defining (and perhaps assessing) the quality of working life in terms of behavioral reactions to working life; furthermore, we would avoid the pitfalls of using job satisfaction as a criterion.*

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*See L. E. Davis, Job satisfaction Research: A Post-industrial View (Industrial Relations, 10, 1971, 176-193) for one view of such drawbacks of job satisfaction.

The problem then became one of generating a list of criteria that could be directly applied or operationalized in behavioral terms, or from which more-or-less direct behavioral outcomes could be expected. Such criteria would become the outcome measures of the quality of working life, and could be considered supplements to or even substitutes for job satisfaction measures. The criteria would not themselves be "quality," but they would allow the user to make up his or her own mind about how much of any one of these would be enough (or too much) for a definition of quality.

Although we excluded a large portion of the available literature as being "morale studies" (containing no behavioral measures related to characteristics of the job or work), much literature remained to be summarized if we were to look at fifteen years of publications. We therefore tested eleven categories that we felt would cover the major outcome variables, that could also be operationalized in behavioral terms, and that consciously excluded attitudes per se. These eleven quality of working life criteria, which will be described in more detail in the following section, are as follows:

Alienation

Health and safety

Economic security

Self-esteem

Self-actualization

Work environment

Control and influence

Organizational enclosure

Career aspirations

Extra-work activities

We fully realize that these categories are not perfect, but our informal tests established that they were at least useful for the task at hand.

During the past two decades, the quality of working life has not been studied systematically but much research has been done on "human relations" at work. What we need to do at this point in our collective experience is to summarize what has been done, evaluate how well it has been done, and identify the gaps in this knowledge base.

The present paper therefore undertakes three tasks. First, it considers the theoretical and conceptual problems of defining the quality of working life. Second, it examines the results of social science research on work over the past fifteen years. This portion of the paper is based on a bibliographic search of the relevant literature, supported by a Manpower Administration Contract of 1972.* The present review of the literature includes a continuation of the foregoing discussion of methodological and measurement issues, as well as a description of general results and trends and a sampling of specific findings. The third task undertaken here is to look ahead from the present position of social science--to comment upon and recommend changes in research directions on the basis of what is known coupled with whatever guesses can be made about the future.

To summarize briefly the results of the second task (a more detailed discussion will follow): past research into the quality of working life, taken as a whole, contains nothing that is likely to radically change the directions of study in the field. Nor does the literature contain many surprises. The state of the art, as represented by research for

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*Taylor et al., op. cit.

the period 1957-1972, is characterized by large-scale, static investigations; over time, they show increasing concern for the dignity of the individual. One major segment of research has examined job and work demands; more recent studies in this area are beginning to illustrate some effects of job design on employee behavior.

Quality of working life as related to issues of concern to the society as a whole is less well represented in the literature. Most of such evidence is to be found in British and Scandinavian studies. It is encouraging, however, to note an increasing tendency to report research on issues of dignity, development, and concerns of the whole person.

There is also a trend toward explaining phenomena in terms of multiple causes; mediating and contingency variables have begun to replace simple, two-element models of cause and effect.

Otherwise, however, the research conducted during the past fifteen years is deficient in field investigations that are both intensive and systematic. Few cases evaluate change over time, although longitudinal studies are becoming more frequent.

Finally, although our bibliographic search was undertaken specifically to review studies that measured the quality of working life, or its outcomes, in terms of behaviors, we found the shortage of quantifiable behavioral measures of QWL to be so acute that we were forced to include studies of employees' attitudes toward elements of the work life setting. If we are to learn effectively from studies now in progress or about to begin, this lack must be overcome. Our findings, then, support the strong concern, recently expressed in various quarters, for standardization of measurement in QWL research.

II. A Framework for the Quality of Working Life

A. Problems of Developing Evaluation Criteria

As indicated above, one of the central impediments to defining quality of working life or to diffusing approaches to its enhancement is the deficiency of information on the research that has been conducted. Such research has been reported in a wide scattering of journals covering a variety of disciplines. There has been no central forum for quality of working life concerns. One result has been a curious situation: occasional books on the subject have been treated as prophesies, whereas articles in professional journals have received relatively slight attention. Meanwhile, organizational leaders and governmental policy-makers, seeking both ideas and objective results, have been confused by the disjointed and not infrequently conflicting information placed before them.

Central to the evaluation problem is the definition of quality of working life, for if we cannot agree on what we mean by quality of working life, then the problem of evaluating our attempts to improve it become nearly insurmountable. The key to studying, evaluating, or diffusing information about the quality of working life lies in the formulation of some coherent body of theory as a basis for examining ongoing systems and intervening in ways that will improve those systems. To identify and measure successful outcomes of such interventions, it is necessary to develop a set of conditions and relationships that we can agree constitute the quality of working life.

With such a basis we can also enumerate and compare the costs of a low quality of working life and the benefits of a high quality of

working life. Such benefits, or the absence of such costs, seem to have created the current popular and professional interest in the quality of working life. In employing organizations, the costs of a low quality of working life may include worker absences and turnover; sabotage of product and plant; increase in such administrative costs as supervision, quality control, and work scheduling; and the underutilization of human resources.* To go further, we can talk about costs to society. There seems to be some evidence of increasing socio-political costs: decreased citizen involvement in the political process, and limited national skill resources as a consequence of the rigid skill distribution associated with fractionated jobs.** The costs to individuals of a low quality of working life can be seen to be wasted skills, limited personal development, illnesses (physical as well as mental), insecurity, and poor relationships off the job, in the family, in the community, and during leisure time.

But to consider these costs is to consider only what might be eliminated or reduced, or how we might improve our own society or world society as a function of improving work. The solution is not to measure work satisfaction or worker alienation as entities; the solution is to develop a set of criteria that will serve a number of quality of working life perspectives. Just as the costs of a low quality of working life can be seen to affect organizations, societies, and individuals in

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*These effects are suggested in a number of recent publications. C.f., Walton, R.E., "How To Counter Alienation in the Plant," Harvard Business Review, December 1972, pp. 70-81.

**C.f., Sheppard, H.L. and Herrick, N.Q., Where Have All the Robots Gone? (New York: Free Press, 1972).

different ways, it is possible to differentiate perspectives on the quality of working life, according to the points of view of organizations, societies, or individuals. For the individual, quality of working life is the experience of being at work and working. For the employing organization, quality of working life can be seen as a consequence--the central concept of motivation to work. From the societal point of view, quality of working life can be seen as a determinant of national productivity, product quality, environmental quality, and the health of the political system.

It is also possible to consider different national or international perspectives. Quality of working life in the United States is more likely to be defined in terms of workplace democracy or direct participation in work-related decisions, whereas in Yugoslavia or in Scandinavian countries it may more readily include issues of representative industrial democracy or co-determination. In other, less industrialized countries, for some years to come, the definition of quality of working life may center on adequate levels of job security, pay, and physical working conditions.

Given this variety of perspectives on the quality of working life, it seems useful, if not essential at this early stage in the study of quality of working life, to begin to develop a set of criteria for quality of working life that attempts to incorporate all of these points of view. Given the present state of quality of working life definitions, it does not seem presumptuous to attempt in the present paper a list (and therefore tacit definition) of quality of working life criteria that satisfy these various points of view.

A problem in developing evaluation criteria for quality of working life, beyond the disparate or varied viewpoints, involves the nature of measures or criteria: are they actually measures of the quality of working life, or are they measures of the characteristics of working life? On the one hand, we can talk about criteria for the quality of working life based directly on measures of working life characteristics; for instance the amount of control and influence exercised on the job. On the other hand, we may define the criteria of quality of working life as the outcomes of the quality of working life; for example the amount of individual skill development on the job can be a measure of "self-actualization." We can define the measures as "elements" of the quality of working life, or we can define them as "consequences of those elements" of the quality of working life. In the first instance, deciding what is to be included in the criteria requires only that we determine a list of job or work characteristics or elements, (and it does not include the levels at which these characteristics can be considered to represent high or low quality.) The second class of measures, however, requires selecting a set of variables that are actually consequences or outcomes of work characteristics or elements. The distinction can thus be expressed as that between the job or work itself (its characteristics or elements) and the resultant behaviors (outcomes or consequences), all of which are expressed as criteria of the quality of working life:

Job or Work Characteristics (direct measures)	Resultant Behaviors (outcome variables)
Work environment	Alienation
Control and influence	Health and safety
	Economic security
	Self-esteem
	Self-actualization
	Organizational enclosure
Career aspirations	Career aspirations
	Extra-work activities
	Home and family

Career aspirations appears in each set of criteria, as discussed in the following section.

B. Operationalizing Evaluation Criteria

We have attempted in the present analysis to create a set of evaluation criteria (both direct and outcome) for the quality of working life which would satisfy our concern for measures, which were reasonably direct and objective, and which would permit assessment of the literature from the several viewpoints distinguished above. In reality we had a viewpoint of our own to start with--that of the individual rather than that of the employing organization or of society--and the resultant list of criteria reflects it.

The rationale for assuming that the use of one point of view would serve for the others is given some support in the recent efforts of a group assessing QWL evaluation criteria. In September 1972, at the Ford Foundation-sponsored Conference on Quality of Working Life, a special task force undertook to develop criteria for quality of working

life. They began with recognition of the individual, organizational, and societal perspectives.* The task force assumed that definitions of relevant criteria differ, depending upon perspective. They too took the position that, of the three perspectives, the individual point of view was the most central. It follows that the societal view could be considered a function of the individual's quality of working life. The task force went on to say that they assumed the same to be true for the view of the employing organization; that is, quality of working life for the organization can be defined as a result of individual quality of working life. The task force assumed that the relationship is an intransitive one: that quality of working life for the individual, although it can define quality of working life for the organization or for the society, should not as readily be defined by them.

The basic list of eleven criteria has been presented above. What follows here is a description of our original conceptualization of these eleven criteria, combined with the description of some of the specific measures and variables we found in the literature** and assigned to those criteria. The criteria are presented in both conceptual and operational terms. In addition each criterion will be identified either as a direct measure of a work characteristic or as an outcome or resultant measure.

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*C.f., "Report of the Task Force on Evaluation," International Conference on the Quality of Working Life, Arden House, Harriman, N.Y., September 24-29, 1972. Unpublished. Available from Quality of Working Life Program, Graduate School of Management, University of California, Los Angeles. Los Angeles, Calif. 90024.

**In the interest of brevity and readability the examples given as actual measures found in the literature for each criterion represent only a portion of those observed. Readers interested in additional detail are referred to the technical appendices of the bibliography.

To reiterate, this list of eleven "quality of working life criteria" represents a list of variables that we hoped would allow us to classify many if not most work characteristics and behavioral outcomes of working life.

The quality of working life criteria were initially defined conceptually and subsequently defined operationally in the following ways:

1. The alienation criterion was defined conceptually as a distancing or estrangement of the job occupant from the job, from the task, from the organization, or from himself as an employed person. Alienation is clearly an outcome variable, rather than a characteristic of the work. The concept of alienation was most frequently measured or evidenced, we found, by absence, voluntary turnover, tardiness, job-hopping, propensity to leave, grievances, work stoppages, strikes, positive attitudes toward strikes, expressed boredom or dislike of the job, perceived meaninglessness of work, lack of personal involvement, or withdrawal from the work situation.

2. The health and safety criterion was conceptually defined as the state of health, both mental and physical, and the notion of being safe from physical danger. This criterion is also an outcome variable. Mental health was evidenced in the literature in measures of stress, tension, pressure, anxiety, depression, schizophrenia, and frustration. Physical health was most frequently measured by sickness-caused absence, coronary disease, ulcers, psychosomatic disorders, fatigue, biochemical stress, medical claims, infirmary calls, and the like. The third element, safety, was most frequently measured by accidents, measures of unsafe work area, and danger.

3. The economic security criterion, an outcome measure, conceptually was composed of wages, security of employment, seniority systems, pension schemes, and the like. Economic security was most frequently found to be measured by payment schemes (such as piece rates, incentive plans, Scanlon plans, and bonuses), fringe benefits, and earnings potential. Pay and salary satisfaction was also measured. Economic security was also found to be measured by such things as job security, threats to security, layoffs, loss of job, unemployment, irregular employment, risk of compulsory retirement, savings or lack of savings, and uncertainty about the pay system.

4. The self-esteem criterion, an outcome measure, conceptually was defined as one's satisfaction with oneself, one's feeling of self-worth, and one's attitudes toward strength of occupational identity, as well as objective status and perceptions of status. Self-esteem was found to be measured in the literature in a number of ways. Perceived authority and responsibility were measured by satisfaction with decision-making, perception of the job as responsible, constant inspection of

one's work by superiors, and the like. The sense of confidence and achievement was found to be measured by, among other things, perception of the job as requiring skill, pride in the capacity to do the work, feeling the work load was or was not too heavy to do well, pride of workmanship, a sense of doing something worthwhile, and job pride. Recognition or respect on the job was measured by such things as respect from peers, respect from colleagues, professional recognition in one's field, recognition of a job well done, and rewards for performance. Status and prestige were measured by such things as perceived status and importance in the organization, hierarchical status, professional identification or professionalism, and feelings of social inferiority.

5. The self-actualization criterion was conceptualized in two components. The first component was individual learning and growth (5a); the second was the individual's utilization of his own knowledge and skills (5b). Both of these can be seen as outcome variables.

With regard to the learning and growth component (5a), the literature was found to contain a number of aspects, including challenge, knowledge and education as prerequisites for jobs, learning on and from the job, learning other than on the job, personal development and creativity, and satisfaction of needs for those things.

The second component (5b), use of existing competence, was also found to be measured in the literature in a variety of ways. Included were such things as creativity (creative problem-solving, creative thinking, expressing new ideas, being experimental, and so forth), satisfaction with contributions to technical knowledge, and opportunity and freedom to pursue one's own research aims. Use of existing competence was found to be directly measured by such things as using skills and abilities, decision-making regarding work methods, worker intervention in the process, and team collaboration. A number of studies measured the use of existing competence and satisfaction with opportunities for the use of existing competence. Perceived use of existing competence and perceived unused competence were also measured in a number of studies, by such things as feeling that one's skills were not used on the job, feeling that one could do more difficult work, and perceptions of being excluded from problem-solving or decision-making.

As can be seen, self-actualization measures can be divided in several ways, such as (a) the demands of the job for growth and learning and for use of existing competence, and the opportunities for using existing competence; or (b) perceptions of employees that they either have enough or need more of these things. In some cases these latter measures were simply satisfaction scores, whereas in other cases they were actual perceived amounts or perceived degrees of opportunity.

6. The environment criterion was conceptualized as including not only the traditional component of working conditions in the physical sense (6a) but also the social work environment (6b), which includes the interactions among people in task-related interactions as well as in organizationally relevant, and informal social interactions. Of the criteria so far described, work environment is the first of the work characteristic, rather than "outcome," type.

The first component, physical work environment (6a), was found to include environmental factors such as noise, heat, smoke, and danger;

general physical working conditions such as provision of recreation and other facilities; and unpredictability of surroundings, as well as technology-related factors such as supplies and equipment and types of tools. This category also picked up measures of workers' improvement of the workplace and included measures of workplace layouts, spatial separation, lack of mobility or drabness of surroundings.

Social work environment (6b), the second component of work environment, was found in the literature to include a number of dimensions or measures. Specifically, the most important of these categories were non-task-oriented interpersonal relations, superior-subordinate relations, and peer or work-group relationships in general. The first of these three important categories, the non-task-oriented interpersonal relations, was specifically found to be measured by perceptions of congeniality, intimacy, opportunity for interactions, compatibility, conflict, cohesion, emotions in group settings, and the like. The second category, superior-subordinate relationships, was primarily characterized by measures of supervisory and leadership styles, such as "initiating structure" versus "consideration," contact with superiors, and perceptions of the relationships.

The third category, work-group or peer relationships, included such measures as peer leadership, teamwork, task interdependence, group cooperation, joint problem-solving, participative groups, self-sufficiency of groups, and mutual influence within groups. In addition to these three major categories, a number of other, less frequently found measures were included in several other major headings. Communication and information flow, for example--including patterns of communication and sociometric choices of workmates or supervisors--were found in several instances. Social isolation was another category. Satisfaction of social needs was yet another category. Stresses and strains within the social system and hierarchical structure of the social system was another general social environmental subhead, as was work-group characteristics and behavior (group size, opportunity for interaction, age, age ratios, and so forth). Social work environment was one of the most frequently observed quality of working life variables.

7. The control and influence criterion is considered another characteristic of the work rather than an outcome. Control and influence conceptually was seen as the notion of influence over one's task, degree of self-control, or discretion on the job. Control and influence included the notion of devolution of authority that has been a popular concept in the organizational and human relations literature for at least the past several decades.

The specific variables that we found in the literature of the past fifteen years and that we felt contributed to measures of control and influence were the following: authority (perceptions of or satisfaction with); autonomy (perceptions or satisfaction with); decision-making, freedom, industrial democracy, managerial influence, influence among peers, influence on the organization or the environment, authoritarian vs. permissive leadership styles, participation, responsibility, and structural constraints on control and influence (span of control, bureaucratization, formalization of roles, hierarchical authority, branch or departmental autonomy). Control and influence, like social work environment, was found very frequently in the literature.

8. The organizational enclosure criterion is seen as an outcome variable. Organizational enclosure is a concept invented for the bibliography and meant to capture such notions as involvement on the job, motivation, feeling included, commitment, and loyalty. These concepts, then, define what we termed organizational enclosure. We called it "enclosure" to distinguish it as an organizational or workplace variable, as opposed to a purely individual variable such as "involvement," and to distinguish it also from more positive terms such as "inclusion." And we called it "organizational" to distinguish it from the alienation criterion.

Organizational enclosure and alienation represent the two extreme ends of the total range of values from total commitment to organization to total withdrawal from it. At a neutral point on the scale, there is neither organizational enclosure nor alienation. Between the neutral point and the ends of the scales either organization enclosure or alienation increases. In other words, one extreme of the scale represents an attraction to, and the other extreme represents a distancing from, the organization.

In the literature, we found organizational enclosure measured empirically in the following ways: the congruence between the goals of the individual and the goals of the organization; the goal integration or satisfaction with role expectations. We included measures of job involvement (identifying with the job); involvement in and importance of work role; interest in the product; voluntary overtime; and arriving early for work. Another measure of organizational enclosure was job tenure and organizational tenure, in those cases in which tenure was considered by the original authors to be a measure of commitment to the organization. Loyalty to the employer, to the organization, or to the superior, or the refusal to be transferred, were considered to be aspects of general loyalty. Finally, organizational identification and integration, including measures of identification with the organization or managerial objectives, identification with one's work unit, perceived involvement, sense of membership, and sense of belonging. Included here were such things as reduction in turnover and opposition to unionism.

9. The career aspirations criterion includes, on the one hand, career opportunities, and on the other hand, career aspirations and expectations. This criterion includes both work characteristics and outcomes. We did not want to overlook the emerging idea of horizontal careers, as opposed to vertical careers: career success can be considered not only in terms of vertical promotion through the hierarchy but also in horizontal terms, such as growing and becoming more skillful or talented within a particular line of skilled or responsible endeavor.

In the literature we found career aspirations and characteristics measured most frequently within the three general categories of actual advancement or promotion; the perception of opportunity for advancement and promotion; and career goals and mobility. The latter category including mobility striving, expectations, aspirations, career advancement and development, occupational status, and career anxiety.

10. The extra-work activities criterion is used to refer primarily to the impact or outcome of aspects of the job upon extra-work activities. Conceptually, we saw extra-work activities divided into four

basic activities. The first two of these were the leisure-time activities involved with consumption (10a) and creation (10b). These two categories were separated conceptually in that the former is used to refer to quality of life in general as a function of affluence and material possessions. The latter category was seen as a creativity function--a utilization of skills and ability in leisure time--which, although it might involve consumption, did not necessarily do so and was not central to the consumption. A third category within extra-work activities was community-citizen involvement (10c): the use of one's time (or the ability to use one's time in either civic or citizen affairs. Voting activities or behaviors were included as an aspect of community-citizen involvement. In this context we were specifically looking for work characteristics--quality of working life--that could be directly related to community-citizen involvement.

11. Home and family, the final criterion in the total list, and the fourth "extra-work" variable was the impact of quality of working life, on family relationships, and their disruption due to working hours, conditions of work, or stresses or strains created by the job.

Operationally, in the literature we found a number of measures for the various extra-work activities. In general, extra-work activities were found to be measured by social and personal adjustment: outside social ties, social isolation vs. participation, value systems, and the notion of "blue-collar blues." The specific category of leisure-time consumption (10a) was found to include measures of standard of living, desire for consumer goods, spending, shopping, and passive leisure activities. Creation (10b) was found to be measured by creativity off the job. The first major category of community-citizen involvement (10c) included a number of measures in several major categories: anomie or normlessness; community-civic participation, which included membership in voluntary organizations; church and community participation; locality-based social networks; and alienation from one's society or social role. The second major category was informal social relations with workmates away from the workplace. The third included political involvement and attitudes, which incorporated voting and other involvement in electoral politics, party affiliations, perceived individual impact on the political process, and attitudes toward labor union-political party links. Race attitudes and ethnic prejudice, in the few studies that measured these things, were also included under community-citizen involvement.

Finally, home and family activities (11) were found to be measured by disruption of work and family relationships, by work anxiety, and by overtime. The social life centering in the nuclear family, family leisure patterns and changes in those patterns, familial roles, kinship, social networks, marital status, family responsibility, and family expectations were all found as variables in the studies reviewed for the bibliography and included in the home and family criterion.

The foregoing eleven major categories of our definition of the quality of working life included what could be considered to be elements of all of the three perspectives on quality of working life discussed above. Our definition of quality of working life was based on the perspective of the individual. Quality of working life was taken to be the phenomenological experience of people at work; however, we were at least minimally interested in the points of view of the organization and of society, especially as they affected quality of working life for the individual. For that reason we included the measures of political efficacy or the impact of work on political involvement and civic involvement, as well as the impact of work on family life and on other extra-work activities. These are clearly part of the quality of working life from the societal point of view. The organizational perspective of quality of working life includes organizational enclosure as well as career aspirations. Both of those categories are variables that organizations themselves would recognize as reflecting quality of working life: identification with one's task and work, high commitment to organizational goals and missions, and great loyalty to management. Management and workers also often see quality of working life as the opportunity to get ahead. The perception of vertical promotion opportunities is or can be considered a notion of quality of working life from the organizational point of view.

The remaining quality of working life criteria refer basically to the individual. The notions of health and safety and economic security (criteria 2 and 3) have been included in the quality of working life

concept for at least the last three decades. The notion of alienation is the antithesis of organizational enclosure. A high quality of working life would imply the absence of alienation, but it may not necessarily involve full commitment to or identification with one's job and work, especially as one's work affects one's other roles such as civic participant or family member. The criteria of self-esteem, self-actualization, social work environment, and control and influence may be seen as strictly individual aspects of the quality of working life; however, these also affect organizational and societal features.

This set of eleven QWL criteria form the core of the bibliography both conceptually (as the implicit definition of QWL) and empirically (as the starting point for the actual literature search). Let us turn to the application of the criteria in the methodology of the literature search.

III. The Methodology for the Bibliographic Search

The search was conducted in two major phases. The first phase included both setting up the procedures and informally assessing the reliability of the judgment of the abstractors in their selection and identification of variables as representing QWL criteria. The second phase involved the actual literature search and selection required to produce the bibliography. The abstracting team, three abstractors and their supervisor, met once a week during the ten months of the total process.

We found that the abstractors, who had been in considerable agreement regarding the conceptual definition of the eleven criteria before the search began, were able to agree with the selection and classification of QWL criteria variables made by one another during the first phase. Furthermore, agreement on the selection and classification of "work characteristics and outcomes" measures in the literature as QWL criteria

was maintained as the work continued.

The second phase of the search involved the review of English-language periodicals and books covering the period from 1957 to 1972, as well as recent unpublished technical reports and case abstracts. The periodicals searched were primarily those in the applied social sciences; that is, industrial psychology, sociology, public administration, management, and industrial relations. Some articles were drawn from older literature and from popular periodicals. The major basis of the choice of an article or book was that it reported the examination and behavioral measurement of at least one of the eleven criteria.

We found that these criteria do represent the most general variables that have been measured in the literature. That does not mean that books and articles included and abstracted in the bibliography make specific reference to one or another of these eleven parameters. Rather, it means that we selected from published reports only studies reporting the associations between what we classified as a behavioral measure of a quality of working life criterion, and whatever individual, work, or organizational factor was measured, and that we coded the subject matter of each article and book according to the list of eleven variables. The practical result has been to condense the literature in a way that makes the bibliography strictly relevant to the task at hand, even though some abstracts do not reveal the full scope of the research reported in the original source.

Several measurement issues became apparent as we undertook the bibliography. These became the basic standards by which we determined whether to include in the bibliography an article reporting measurement of one of our quality of working life parameters.

First, as discussed above, we were interested in studies in which one or more of the quality of working life criteria were measured quantitatively and in which associations with some other organizational, work, or individual factor were reported. This standard was quite easily met by journal articles, since most of the journals we reviewed published articles primarily of a quantitative nature; however, it was more difficult to apply this standard to cases and books.

Another standard for inclusion of an article or book was whether quality of working life criteria were measured in behavioral terms. In part, that issue had to do with our definitions of the quality of working life criteria; by definition, we excluded attitudinal measures such as job satisfaction or satisfaction with supervisor, work group, and so forth, except where they could be used as perceptions of working life or as surrogates for behavioral measures. In the main, however, we tried to exclude those studies in which attitudes alone--as opposed to perceptions of behavior or measures of behavior--were used.

We also intended to include articles and books which relied upon archival or record data, or that reported comparative analyses of quantitative findings already published.

Our first and second standards for inclusion were that a study considers some behavioral measure of one or more QWL criteria and the relationship of that measure to some other work-related variable. Furthermore we required that the study reports empirical investigation of that other work-related variable.

Such "other" variables are those which could be included in a universe of factors that are related in some way to the quality of working life. These other variables are of three kinds: correlates of QWL

criteria (independent, or causal variables); contingency or control (individual) variables; and demographic variables; each will be discussed below. Unlike the parameters for quality of working life--which were classified in advance, conceptually defined, and then sought in the literature--the three types of quality of working life variables were not anticipated in advance. As long as the quality of working life criteria were associated with something, the variables with which they were associated were simply collected, tabulated, and subsequently collapsed into a smaller set of categories.

Correlates of the Quality of Working Life: The independent, or causal, variables can be referred to as quality of working life criteria correlates. Although they can be considered in some loose sense to have consequences for the quality of working life parameters, that does not imply that any but a very few studies attempted such directly causal analyses. Associations were identified, however, whether by statistical correlation or by some other less rigorous method. These independent variables, according to our post hoc classification, were as follows:

INDEPENDENT VARIABLES

ORGANIZATIONAL CHARACTERISTICS

Process

- Climate
- Functional division
- Formalization of policy, rules

Structure

- Hierarchy
- Power base
- Interdependence of units
- Reward structure
- Demographic characteristics
  - Age
  - Size
  - Location
  - Product
  - Ownership
- Organizational environment
- Centralization-decentralization
- Union recognition
- Organization change
- Environment change

OCCUPATIONAL AND JOB CHARACTERISTICS

- Type
- Time conditions
- Feedback
- Demands
- Mobility
- Supervision
- Work group
- Status and prestige
- Training
- Technology
- Job change
- Technology change
- Decision making

The first major category of quality of working life criteria correlates is organizational variables. The organizational correlates of quality of working life parameters include such functions of the organizational process as organizational climate, organizational functional divis'on, and the formalization of organizational policy and rules. Organizational characteristics also include such structural characteristics as hierarchy, the dominant power base, the interdependence of units within the organization, and the reward structure of the organization.

The second major category of quality of working life correlates is concerned with the workplace. The first group of characteristics describes the job or work, such as its type; the second group centers on such aspects of the workplace as supervision; and the third deals with changes in the work environment.

The foregoing independent variables concerning the organization and the workplace are central to the study of the quality of working life, since they form the context from which work experiences emanate and by which they can be changed.

Contingency or control (Individual) Variables: The following were classified as contingency or control variables, for reasons discussed below.

CONTINGENCY OR CONTROL (INDIVIDUAL) VARIABLES

INDIVIDUAL CHARACTERISTICS

- Age
- Tenure
- Sex
- Race
- Marital and family responsibility
- Cultural background
- Experience
  - Personality, needs, expectations, life style
  - Skills, abilities, health
- Education
- Income

The variables that deal with personal background characteristics differ from the independent variables. In view of the emphasis in the present literature search and analysis on the objective dimension of the work situation as an independent variable, it is difficult if not impossible to justify the inclusion of personal background characteristics in the same framework. This does not deny that in our search of the literature we found studies that reported empirical examination of the relation of what we term QWL criteria to such personal background characteristics. In fact, a large portion of the research reports reviewed and abstracted were so classified. However, these individual variables can be theoretically considered not as causal but as control or contingency variables to the relationships between work variables and QWL criteria. As will be reported below, contingency studies have become more numerous over the past few years, and more individual variables are being used in those models.

Demographic Variables: Certain other variables also are included in the analysis and presented in the bibliography. These variables, referred to as demographic variables, are those which represent some specific characteristic of the work, the organization, or the individuals in a given study. These variables were not, however, examined in relationship to the quality of working life criteria, in the study in which they were found. The demographic variables are as follows:

DEMOGRAPHIC VARIABLES

Organization

- Size
  - Research site
  - Company
- Location
  - Urban-rural
  - Nation (U.S., U.K., Europe, other)
- Ownership
- Age
- Process (organic-mechanistic)
- Structure (tall-flat)
- Social innovations (industrial democracy, teambuilding, autonomous groups, other)

Work characteristics

- Blue-collar (industrial-service)
- White-collar (industrial, service, administrative, professional)
- Job enlargement

Technology

- Process (batch, mass, continuous process)
- Type (traditional, industrial, post-industrial)

Employee characteristics

- Age
- Tenure in company
- Education
- Sex
- Race

IV. General Results: The State of the Art

A. General Statistics

The bibliography reviewed fifteen years of empirical research covering the period from 1957 to 1972. The 365 studies that were abstracted produced 1,078 separate notations of QWL criteria included in the bibliography. Of these 1,078, 718 were from articles published in journals or periodicals. The remainder were divided about equally between published books and monographs, and unpublished reports of research. In all, some 5,070 associations were noted between one or more of the quality of working life correlates (specified in the preceding section) and the 1,078 notations of the eleven criteria of quality of working life. (See Figure 1)

The bibliography was originally assembled to permit assessment of the focus of each study with regard to the eleven QWL criteria. Initially, it was therefore important to account for the sheer frequency of the 5,070 associations we found in the literature we searched. Figure 1 provides the source data which permit this count. These relationships are usually presented in the literature as "statistically significant," although more informal associations are also occasionally reported. In only a very few cases are non-relationships reported where a test of association is attempted. These frequency counts also include some few studies where both variables (row and column) were studied simultaneously; their associations being neither described nor implied.

Figure 1 presents the breakdown of the total of 5,070 associations between the eleven criteria of Quality of Working Life and the 42 classes of correlates. This figure, derived from the summary output from the bibliography, provides an overall view of the

Figure 1

Contextual Matrix of Parameters in the Quality of Working Life:
Frequency of Associations Between 'Criteria' and 'Correlate' Variables

	1. Alienation	2. Health & Safety	3. Economic Security	4. Self-Esteem	5. Self-Actualisation	6. Learning & Growth	b. Using Existing Competence	Work Environment	a. Physical	b. Social	7. Control & Influence	8. Organisational Enclosure	9. Career Aspirations	10. Extra-Work Activities	a. Consumption	b. Creation	c. Community-Citizen Involvement	11. Home & Family	Total Frequency	Sub-Totals
Organisational Factors	12*	2	9	9	4	3	5	1	3	11	18	7	4	1			1	1	91	
-Climate	14	8	11	16	7	9	10	1	5	22	28	15	12	4			2	2	166	
-Functional Division	6	5	5	9	3	5	5	1	3	8	10	6	5	2			1	1	75	
-Formalisation of Policy, Rules	10	4	4	12	4	4	6	1	2	13	18	7	12	1				2	100	
-Hierarchy	20	11	30	29	15	19	21	1	2	38	41	24	15	5	1		4	3	279	
-Power Base	14	6	8	8	7	4	8		1	11	21	4	8	1	1			2	104	
-Interdependence of Units			2	1		1	1			2	2	1	1						11	
-Reward Structure	26	16	28	16	12	9	13		6	21	26	19	15	4	1	1	2	2	217	
-Organisational Characteristics																				
-Age	2	1	3	1	1	1	2		1	3	4	1	1	2			1	2	26	
-Size	11	4	9	6	5	3	5		2	16	16	7	3	3	1		1	3	95	
-Location	4	3	6	3	2	2	4		1	7	8	3	2	3	1		1	3	53	
-Product	3	2	2	1	1	1	2		1	2	2	3		2			1	1	24	
-Ownership	1	1	2	3	1	1	3			4	4	1	1	2			1	3	28	
-Organisational Environment	10	5	11	5	3	6	7		2	10	11	8	9	4	2		1	4	98	
-Centralisation - Decentralisation	2	1	1	1						2	2		1						10	
-Union Recognition	4	2	3	1	1	2	2		1	2	4	3	1	1	1		1	1	30	
-Organizational Change	12	9	10	10	4	8	10	1	2	19	19	14	4	3				3	128	
-Environmental Change	1	2	2	1			1			1	2	1	2	1			2	1	17	1552 (30.6%)
Occupational and Job Characteristics																				
-Type	27	16	30	25	15	14	19		6	35	40	24	15	15	3		6	9	299	
-Time Conditions	12	12	9	10	2	3	6		5	11	10	7	10	7	2	1	3	6	116	
-Feedback	8	5	4	5	3	4	8		2	6	7	7	3	2			1	1	66	
-Demands	45	32	33	36	22	29	28	1	10	53	68	36	27	12	1	2	6	11	452	
-Mobility	7	7	8	6		6	7		2	7	10	4	8	3			2	3	80	
Supervision	25	18	22	19	8	11	15		6	41	38	16	19	7	1	1	2	6	255	
Work Group	18	13	13	15	8	11	16		8	34	33	16	10	5		1	2	3	206	
Status & Prestige	7	10	13	9	8	5	6		1	10	11	10	5	4	2		4	6	111	
Training	12	5	8	9	3	12	12	1	1	26	24	12	8	2			2	5	142	
Technology	21	15	20	21	8	12	14	1	9	28	34	16	11	10	1	3	4	6	234	
-Job Changes	15	6	5	9	5	11	7		1	12	23	12	7	2				2	117	
-Technology Changes	5	9	10	10	3	6	7		1	13	12	6	7	1				1	91	
-Decision Making	5	3	4	4	2	6	6		2	7	14	7	4	1			1		66	2235 (44%)
Member Characteristics																				
-Age	24	14	25	15	9	7	10		7	19	20	18	15	6	2		5	5	201	
-Tenure	16	11	17	11	8	5	7		3	18	19	17	11	6	2		2	4	157	
-Sex	15	8	14	10	8	5	6	1	2	10	12	8	11	2	1		3	4	120	
-Race	2	1	3	2	1	2			1	1	2		3				1	1	20	
-Marital and Family Responsibility	10	5	7	5	2	2	3	1		6	5	4	5	3	2		3	4	67	
-Cultural Background	7	6	13	7	4	5	5		1	12	12	6	6	6	3		4	9	106	
-Experience	11	8	6	8	3	4	5			10	10	10	9	5	1		1	4	95	
-Personality, Needs, Expectations, Life-style	38	21	24	21	13	8	15		6	29	32	26	24	7	3	1	8	8	284	
-Skills, Abilities, Health	10	9	10	8	4	5	7		2	12	12	9	9	3	1		6	4	114	
-Education	7	6	11	7	2	3	5		2	10	9	5	7	3	3		3	5	88	
-Income	4	3	4	2	1	2	2			3	2		2	2	2		1	1	31	1283 (25%)
Total Frequency	503	325	459	406	212	256	321	11	110	605	695	400	332	153	41	10	89	142	5070	

*Cell Entries represent the frequency of studies (abstracts) in which data from both row and column variables are reported.

variables measured during the 1957-72 period. As can be seen in the columns, the differences among the quality of working life criteria totals are slight, and no statistically significant differences among proportions are evidenced.

The criteria that account for the largest proportion of associations are alienation (criterion 1), economic security (3), self-esteem (4), social work environment (6B), and control and influence (7). Organizational enclosure (criterion 8) also accounts for a relatively high percentage of associations. It can be seen in Figure 1, however, that the largest proportion of associations with any single criterion is accounted for by control and influence, which entered into more than 13 percent of the total number of associations. The criteria that account for the lowest proportion of associations include the physical working environment (6A) and all extra-work activities (10 and 11).

What this means is that, in the journals and books reviewed for the bibliography, a relatively large number of studies have investigated such things as worker alienation, worker turnover, self-esteem, pay-related issues, discretion, control and influence, and the social environment. On the other hand, there has been relatively very little investigation of the impact of quality of working life on home and family and on such extra-work activities as consumption, creation, and community-citizen involvement. Also sparsely represented in the literature are aspects of quality of the physical working environment. It should be noted, however, that the ergonomics, industrial engineering, and operations-research literature should reveal a rather heavier emphasis on the physical working environment; that literature, however, was

systematically excluded from the present bibliography because it was considered a more traditional area of the quality of working life. It is interesting to speculate, however,that although working conditions and physical working environment are considered a traditional area of the quality of working life, pay and attitudes toward pay -- also traditional quality of working life characteristics -- are quite heavily represented in the literature reviewed for the present quality of working life bibliography.

The summary row totals show, first of all, that occupational and job characteristics account for a nominally greater proportion (44 percent) of the total associations with QWL criteria than do either organizational variables (31 percent) or individual respondent characteristics (25 percent). This difference produces a Chi Square goodness of fit test to a rectangular distribution which is significant only at the 10 percent level of confidence. It is interesting but not surprising to note that of the correlate variables as classified here,many of those most frequently found in the literature are those most easily identified (such as hierarchial level, job type, or sex), or are easily quantified (such as member age, or tenure with the job or company). These frequencies might indicate the frequent reporting of "targets of opportunity," or associations of QWL criteria with variables that were merely at hand due to their identifiable characteristics or quantitative nature, rather than variables of interest with regard to QWL in their own right. (The potential phenomenon identified here may bring to mind the drunk who looked under the street light for his lost keys, because it was dark where he lost them.) On the other hand, frequent associations are noted for correlate variables

that do not fit this explanation. In other words,variables like reward structure,job and work demands, supervisory and work group styles and behaviors, technology types, and member personality characteristics clearly represent more systematic measurement, and therefore, presumably, more direct concern with the associations with QWL criteria on the part of the original investigators. In sum: although much has been reported recently in some areas which are easily identified, much has also been done in certain areas where measurement is more difficult.

B. Recent Trends

Analysis of General Findings by Time Period. The section above describes the major findings in terms of the sheer frequency with which certain quality of working life correlates, quality of working life parameters, and major dimensions appeared. The present section will examine the trends over time in the fifteen-year period covered by the bibliography. Although fifteen years is not a particularly long time span in social sciences literature, it is a comparatively long period for considering issues in the experience of work. For that reason, examining the literature for that period in five-year sections has the potential for revealing some interesting trends in the quality of working life parameters that were studied. Figure 2 presents the major findings for the eleven criteria of quality of working life, as well as their totals for the three five-year time periods: 1957-61, 1962-66, and 1967-72.

Figure 2

Figure 2

Frequency of QWL Criteria
Measured by Three Time Periods

QWL Criteria	1957-61	1962-66	1967-72	Total Frequency
Alienation	18	25	65**	108
Health and Safety	10	17	36**	63
Economic Security	13	22	44**	79
Self-Esteem	11	24	51**	86
Self-Actualization	5	14	24**	43
Learning & Growth	5	17	25**	47
Utilization of Skills	9	19	35**	63
Work Environment				
Physical	3	3	10*	16
Social	19	51	91**	161
Control & Influence	17	42	90**	149
Organizational Enclosure	14	33	64**	111
Career Characteristics	9	14	35**	58
Extra-Work Activities	4	10	13	27
Consumption	2	0	5	7
Creativity	4	0	3 ****	7
Citizen Involvement	1	6	16	23
Home & Family	4	6	20	30
Frequency Total	148	303	627**	1078
Percent Total	13.7	28.1	58.2	100

*Distribution differs from rectangular. Sig $\leq .05$.

**Distribution differs from rectangular. Sig $\leq .01$.

The totals show a significantly increasing number of studies in the literature as we go from the earlier period to the later one. Approximately 14 percent of all studies in the present bibliography belong to the five-year period from 1957 to 61; 28 percent are from 1962 to 66; and 58 percent became available between 1967 and 72.

Analysis of trends over time shows clearly that the absolute number of appearances of QWL criteria is increasing at a rapid rate in the literature. Reviewing the specific percentages of individual cell entries, however, suggests that the studies dealing with 'self-esteem,''actualization,' and 'control and influence,' do not significantly increase relative to studies dealing with 'health and safety,' and 'economic security.'

For the areas of 'growth and development' and 'extra-work activities,' the frequencies are smaller, the trends being even less clear. For the 'learning and growth' criterion, the proportion increases (from 10 percent to 36 percent) between 1957-61 and 1962-66. Between 1962-66 and 1967-72, the proportion increases to 52 percent of the total. For 'extra-work activities,' criteria 10, and 11, the period 1957-61 shows a slightly higher percentage of the total for all criteria (16+ percent) than does the second period (1962-66, 23 percent). Neither of these trends, however, differs significantly from the overall distribution.

Analysis of general findings by type of journal. The distribution of studies by journal has been undertaken as illustrated in figure 4. The criteria of quality of working life, plus the totals, are presented against four major categories of journals: sociology,

psychology, organizational science, and business. Figure 3 shows the specific breakdown of periodicals in each of the four major categories.

Figures 3 and 4

Figure 4 reveals that the psychology journals contained the major proportion of studies involving alienation, economic security, self-esteem, growth and learning, and social work environment. The psychology and organizational sciences journals have, between them, the largest share of the studies concerning utilization of skills, control and influence, and organizational enclosure. The psychology journals alone account for nearly 43 percent of the total number of studies reported; the sociology journals account for almost 15 percent of the total. The organizational science literature accounts for some 28 percent of the studies, and 14 percent of the studies are from business periodicals.

As we look at some of the specific quality of working life dimensions such as growth and development we find, as we might expect, two-thirds of the learning and growth studies are reported in the psychology literature. Further, these studies were most frequently reported in the Journal of Applied Behavioral Science (JABS), which carried few quantitative empirical studies; therefore, as suggested in Figure 2, the frequency of studies concerning learning and growth tended to accelerate slightly during the period from 1962 to 1966, when JABS was first publishing and reporting on quantitative research on sensitivity and training groups. That kind of study is becoming less frequent, which is reflected in the slightly diminished number

Figure 3

Periodicals Reviewed for QWL Bibliography, Classified in Four Major Categories

I. Psychology
1. Journal of Applied Psychology
2. Personnel Psychology
3. Organizational Behavior and Human Performance
4. Occupational Psychology
5. Journal of Applied Behavioral Science
6. Journal of Abnormal and Social Psychology
7. Archives of Evnironmental Health
8. Psychsomatic Medicine
9. Family Process

II. Sociology
1. Journal of Social Issues
2. Gerontologist
3. Industrial Medicine and Surgery
4. American Journal of Sociology
5. British Journal of Industrial Medicine
6. American Sociological Review
7. Journal of Chronic Diseases
8. Journal of Health and Social Behavior
9. Social Forces
10. Sociology and Social Research
11. Journal of Occupational Medicine

III. Organizational Science
1. Human Relations
2. Administrative Science Quarterly
3. Science
4. National Academy of Science

IV. Business
1. Industrial Relations
2. U.S. News and World Report
3. Harvard Business Review
4. Annual Proceedings Institute of Industrial Relations
5. Industry and Labor Relations Review
6. Industrial Engineering
7. Academy of Management Proceedings
8. Academy of Management Journal
9. Personnel

Figure 4

Frequency of QWL Criteria
Measured in Four Categories of Periodicals

QWL Criteria	Sociology	Psychology	Organizational Science	Business	Total Frequency
Alienation	9	34	16	16	75
Health & Safety	12	15	5	3	35**
Economic Security	8	27	10	10	55
Self Esteem	6	29	14	7	56
Self Actualization	0	13	13	4	30
Learning & Growth	1	20	5	5	31*
Utilization of Skills	4	18	13	5	40
Work Environment					
Physical	2	1	4	2	9
Social	12	55	31	9	107
Control & Influence	12	43	41	16	112
Organizational Enclosure	7	24	27	10	68
Career Characteristics	9	10	12	4	35
Extra Work Activities	3	7	2	5	17
Consumption	2	0	1	1	4
Creativity	1	1	3	1	6
Citizen Involvement	8	3	2	4	17**
Home & Family	9	6	3	2	20**
Frequency Total	106	306	202	104	718
Percent Total	14.8	42.6	28.1	14.5	100

* Distribution differs from total distribution. Sig $\leq$ .05.
** Distribution differs from total distribution. Sig $\leq$ .01.

of empirical studies on growth and development for 1967-72. The reduction in scientific investigations of training groups has occurred because the groups themselves are increasingly seen as tools of the organizational development specialists, rather than as an important or central research topic.

The dimension of life roles outside of work is heavily accounted for by sociology and psychology journals; approximately 63 percent of all studies concerning that dimension are accounted for by both of those categories of journals combined. It is also important to note that, predictably, the research drawn from the sociology literature was most heavily weighted in the area of community-citizen involvement and home and family.

Analysis of cross national research. Another interesting aspect of the state-of-the-art review of QWL research in the past fifteen years is a gross national comparison of the kinds of studies and variables measured in studies done in other countries, especially Northern Europe and Britain, so far as the literature is available to us. Just as the analyses reported above are relatively crude or gross measures of the state of the art, so is the present analysis of the literature available to us. Although the analysis should use the reports of social researchers in their native country, reporting on what they are doing, the present analysis simply reports the types of measures and the kinds of associations manifested in studies in which the country where the data originates is known. There is no control for the nationality of the investigator. It should also be noted that, as mentioned above, the bibliography is composed primarily of abstracts from books, articles, and unpublished manuscripts available in the English

language. Although there was an attempt to produce English-language abstracts of foreign-language articles and published documents, it was not realized to any significant degree. Therefore, the data reported here come mostly from sources published in English. By this token the results to follow must be read with caution. Other studies available only in the language of study origin might provide different conclusions.

The cross national comparison simply utilizes the cross-tabular indices represented by Tables 4 and 21 in the annotated bibliography.* In the bibliography, the classification codes separated studies into those done in the United States,in the United Kingdom, in Europe, and "Other." This classification breaks down into not-unreasonable frequencies for statistical display as well as for cross-tabular search procedures. The present analysis takes the data specified in the bibliography and not only reviews the general pattern or distribution of studies involving the eleven QWL criteria and the seventeen correlates; it also examines some of the characteristics of the specific studies making up the pattern.

United Kingdom. Although the frequencies are proportionately rather small when compared with the United States, studies undertaken in the United Kingdom represent rather a heavy proportion of studies involving organizational climate, technology, and organizational change.

Studies undertaken in Britain contain a proportionately high frequency of quality of working life criteria. British studies are proportionally rich in the categories of alienation, physical work environment, and home and family, although the absolute number of

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*The bibliography contains an error in Tables 4 and 21. "Europe" and "U.K." column headings should be interchanged in both tables.

studies is small for the latter two. Few if any quality of working life parameters are under-represented in the British sample.

Closer examination of some of the studies undertaken in the United Kingdom shows that these studies have focused upon technology, job, or organizational structure, measuring the effects upon behaviors and/or attitudes of differences in the aforementioned correlates. A rather large proportion of research undertaken in the United Kingdom countries has studied alienation. However, unlike studies in the United States -- where alienation is measured both conceptually (as estrangement) and behaviorally -- in Britain, the majority of research has focused exclusively on behavioral manifestations of alienation, such as tardiness, absence, or labor turnover. Finally, studies undertaken in the United Kingdom represent a considerable research investment in studying correlates of various reward systems and effects on working-class attitudes and behavior of achieving relatively high incomes.

Europe. Although the European studies account for about the same proportion of total research as studies in the United Kingdom, there seem to be relatively fewer manifestations of the quality of working life correlates. There seem to be fewer European studies involving status or prestige, training, organizational changes, or member characteristics. Job characteristics, especially job demands, seem to be reasonably well represented in these studies. European studies contain a proportionately lower frequency of quality of working life criteria or parameters, no one of which in particular seems to be overrepresented. In European studies, however, self-esteem, self-actualization, and the idea of organizational enclosure seem to be underrepresented or absent.

We thought it was of some interest and value to separate the European studies into those that were undertaken in Scandinavia and those reporting data from the remainder of Europe. Most of the studies from Norway deal with the individual correlates of either the effects of participation or the desire for it. Some other Norwegian studies look at the effects of autonomous work groups and various environmental conditions on attitudes and behavior of the work force. In the Swedish studies, research has been on the effects of technological, organizational, and job changes on blue-collar and white-collar workers. A research program dealing with correlates of emotional and physiological stress reactions has also produced several studies using a Swedish sample. Finally, no discernible trends in Finnish research were revealed as a result of the literature search, and no Danish studies were abstracted at all. In the rest of Western Europe, research has been mostly on the effects of technical change. In France, research has been done on attitudinal changes associated with technological changes in white-collar organizations, and on behavioral changes associated with changes in blue-collar technology. The only reference from Germany to be included in the bibliography concerned itself with effects of a change to an electronic data-processing system. In Eastern Europe, the majority of the research abstracted for the bibliography was done in Yugoslavia and centered on the correlates -- attitudes, perceptions, and behavior -- of industrial democracy as epitomized by workers' participation in workers' councils.

Other Nations. On the basis of rather limited data reported in the bibliography, we can conclude tentatively that studies done in other nations exhibit roughly the same distribution of quality

of working life parameters and their correlates as do the studies undertaken in the United Kingdom, Europe, and the United States.

United States. The bulk of the studies reviewed in the bibliography dealt with samples either from the United States or of unknown origin. In many cases, even those that were not identified could be assumed to be from the United States. A review of the data derived from the U.S. samples, therefore, will reflect not only those studies that identify themselves as including or involving American samples but also those using samples that can reasonably be assumed to be American.

There is little to distinguish the American sample from the total data; in fact, since these data account for such a large proportion of the total, they can be described as defining the total. For that reason, many of the characteristics in the bibliography as a whole can also be used to characterize the American sample. As an example, the heavy emphasis on organizational hierarchy, job type, job demands, supervision, and member characteristics can be seen as rather similar to the descriptions of the bibliographic results as a whole, reported above. It should be noted, however, that only a relatively small proportion of studies deals with the quality of working life correlates of organizational changes, technological changes, or work group characteristics and behaviors.

Self-actualization, social work environment, and control and influence also are very heavily represented in the American sample. However, studies dealing with extra-work activities are numerically more but proportionately less in the American sample than

in the other national samples. The quality of working life parameters of home and family and the general extra-work activities category are particularly underrepresented, as are characteristics of the physical working environment. The underemphasis on physical environment was explained above as a by-product of the decision to exclude human engineering, ergonomics, and industrial engineering literature from the bibliography. The American sample seems to differ from the studies undertaken in other countries primarily on the basis of less examination of work group variables on the causal side or home and family and other extra-work activities on the output side.

V. Substantive Findings: Some Sample Results

In addition to its function as a measure of what variables have been studied and what may be in need of additional attention, the bibliography was intended as a resource document for investigators who wish to delve more deeply into the substantive results involving the relationships between any QWL criterion and any specified correlate. The particular indexes for the bibliography were therefore constructed for that purpose. In this section we will present a sample of these substantive searches, using the bibliography index, and their results. The sample of relationships chosen was derived from the major intersections in Figure 1.

Having decided on several relationships of interest, and taking them one by one, the first step was to obtain from the index a list of all study abstracts that report use of the correlate variable of interest. For example, one relationship chosen for presentation here is that between job demands and alienation. The first step, therefore, was to obtain a list of all abstract numbers listed in the index under 'job demands.' The next step involved scanning each abstract listed for the code (1), which denoted appearance of the QWL criteria 'alienation' in whatever terms the original investigator used. It was then straightforward to summarize the statement of relationships from each abstract while at the same time specifying what exactly was used by the original investigator as the QWL "criteria" and its "correlate." This substantive analysis permits investigation of such questions as, What correlates in particular were found related to certain QWL criteria? In what direction did the relationships go? Were they statistical correlations, or were the reports

of observed or assumed linkage over time? Were they simple correlations, or were they contingent upon other variables? In all cases, however, the user must decide at which level the particular QWL criteria becomes "quality" or "high quality" or "good quality" -- no such conclusions are made in the present analysis.

Of the 639 relationships (42x18 = 756, minus 117 empty cells), presented in Figure 1, the following 9 are chosen for presentation here.

QWL Criterion	(associated with)	Correlate
Alienation		Organization size
Alienation		Job demands
Self-esteem		Organization climate
Social work environment		Job type
Social work environment		Supervision
Control and influence		Organization hierarchy
Control and influence		Organization reward structure
Control and influence		Technology
Extra-work activities		Technology

Alienation and Organization Size. The first such relationship in our example is that between the QWL criterion alienation and the correlate organization size.

In examining the eight* studies where alienation and organization size were measured, we find that although the results suggest absence and turnover rates (classed as measures of alienation) are associated with large size of plant or company, more than half the studies introduce additional variables into the causal chain. These contingency variables are mentioned in early studies (i.e., 1958) as well as in later ones (i.e., 1972). Other measures found in the literature and included in alienation as related to organizational size

*The numbers of the bibliography abstracts are: 1009, 1015, 1052, 1101, 1207, 1262, 5023, 8035.

are grievance rates, increased identification with unions, and absence of loyalty.

Alienation and Job Demands. The second relationship examined is that between alienation and job demands. The analysis showed that, although job demands have been studied over the past fifteen years, the pattern of outcomes is different for earlier as opposed to later studies. If we examine the 45 individual abstracts (referred to in Figure 1) that contain measurement of both job demands and alienation, we find that 35* of them actually report examination of relationship between job demands and alienation. The remainder are simply studies in which both variables were studied simultaneously; their association is neither described nor implied. Among the 15 studies carried out between 1957 and approximately 1965, 4 generally conclude that there is no relationship between job dissatisfaction, absenteeism, turnover, or feelings of alienation and job characteristics or job demands; 9 report repetition, machine pacing, and other such job demands as related to estrangement as noted; and only 2 report more job challenge and complexity related to lower alienation.

The remainder of the studies examined, those done since 1965, show a changing trend. Virtually none reported no relationship between alienation and job demands. Eight studies reported relationships between excessive or nonchallenging job characteristics and alienation. Ten studies, on the other hand, reported reduction in alienation as a function of greater work complexity, challenge, and discretion. In addition, three studies since 1965 reported

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*The numbers of the bibliography abstracts are: 1049, 1079, 1084, 1107, 1108, 1128, 1154, 1190, 1202, 1207, 1222, 1250, 1251, 1255, 1262, 5002, 5004, 5009, 5010, 5014, 5022, 5037, 5038, 5043, 5044, 5048, 5049, 8005, 8013, 8018, 8026, 8929, 8030, 8031, 8034.

alienation effects of a range of job demands.

The difference between earlier and later studies is not explained by the data at hand and is not explained here. One tentative hypothesis might be advanced, however. That hypothesis stems from Frederick Herzberg's theories around the idea of intrinsic job satisfiers and extrinsic job dissatisfiers.

Herzberg's early position was that extrinsic job characteristics or job context are primarily related to job dissatisfaction. Many of the studies done in the early sixties were in support of that position. Subsequent or later Herzberg writings show that absenteeism and turnover (among our measures of alienation) tend to be reduced as intrinsic job elements, or satisfiers, increase. The later literature tends to support that idea. In studies dating from the mid-sixties onward, the relationship between job demands and measures of alienation such as absenteeism and voluntary turnover is found to be stronger than is the relationship between job dissatisfaction and work characteristics found in earlier studies.

Self-Esteem and Climate. Eight* of the 17 studies listed as including both self-esteem and organizational climate actually reported associations between these two variables. Of these eight studies, seven were reported in the period 1967-72. These studies can be divided into two groups. In one case management climate, in which individual view was subordinated to organizational need, resulted in lower self-esteem as measured by feelings of earned respect, perception of status, or feelings of self-importance.

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*The numbers of the bibliography abstracts are: 1099, 1114, 1156, 5000, 5007, 5015, 5040, 8020.

Cases of the opposite management climate -- supportive, employee-centered management thrust --show more tendency to be related to satisfaction with "esteem needs" or satisfaction of need for recognition. The former studies tend to be descriptive reports of case studies, whereas the latter studies seem to be more results of large-scale, static survey studies.

Social Work Environment and Job Type. Of the 19* studies reporting some association between social work environment and job type, three quarters were reported during the five-year period 1962-67. These studies report several different aspects of the general relationship, such as differences between white- and blue-collar employees, supervisors and managers, staff and line, or nurses and other professionals. Seven studies examined differences between white- and blue-collar jobs, without other distinctions.

The major result is, however, that half of these studies made between 1962 and 1967 report the impact of distinctions in job type on values, desires,or attitudes regarding some aspect of the social work environment.

Studies reported before 1962 describe such things as frequency of interaction or assessments of authoritarianism among foremen, or the impossibility of team relationships on an assembly line. Similar behavioral measures are more frequently reported in later studies (post-1967) as well. Of the behavioral measures of social work environment and their relationship to job type, little consistency is found. In the

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*The numbers of the bibliography abstracts are: 1037, 1040, 1056, 1072, 1075, 1111, 1119, 1125, 1148, 1155, 1175, 1179, 1182, 1198, 1214, 5010, 5048, 5049, 5050.

early studies, the sample of four abstracts is divided among four different job types, so no consistency is possible. Of the four later studies, three suggested that the relationships they reported were contingent upon other variables such as technology, management values, or involvement in some special project. The remainder of the abstracts examined suggest that blue-collar workers have fewer opportunities for social interaction and that blue-collar workers value it more. Further, both white-and blue-collar workers want supportive supervision and blue-collar workers don't mind task-relevant leadership.

Social Work Environment and Supervision. Over half the 24* studies reporting association between these two variables were published during the past five years. Further, of the total abstracts, only four measures of the QWL criterion, social work environment, are reported as attitudes toward, or satisfaction with, some relationship or need. Sixteen of the studies investigated the effects of supervisory style on subordinate social interaction. The studies divided themselves into whether they emphasized the effects of "positive" behaviors, such as consideration, participation, support, etc., or whether they emphasized more negative styles like authoritarianism, close supervision, less considerate, and structured styles. "Negative" and "positive" supervisory styles were found related to subordinates' social work environment as characterized:

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*The numbers of the bibliography abstracts are: 1011, 1019, 1031, 1114, 1125, 1131, 1148, 1166, 1167, 1175, 1182, 1187, 1204, 1206, 1209, 1210, 1259, 1262, 1271, 5000, 5007, 5020, 5036, 5047

Negative Supervisory Style	Positive Supervisory Style
	-Subordinates share effort
Distrust among subordinates	-Subordinates have social cohesion
No cooperation among subordinates	-Low intra-unit stress
Subordinates unable to call upon others	
Strained social relations among subordinates	-Effective subordinate group
Subordinates share little with peers	-Better integration of subordinates as company and group
	-Close and warm subordinate relations
	-Cooperation among subordinates

The remainder of the abstracts reviewed dealt with a variety of other supervisory behaviors such as task-related leadership (which is reported in several studies as related to subordinate social relations contingent upon some other variable), less direct supervision, supervisors' confidence in subordinates, necessity of communication, and leaderless or self-managed situations. With the exception of task-related leadership, these other cases lend little to the present analysis because of their small number. The QWL criterion in most of these cases, however, remain the cooperation and communication among subordinates in work groups.

Control and Influence and Organizational Hierarchy. Data in Figure 1 suggest a relatively high proportion of associations between organizational hierarchy and control and influence. Most studies we reviewed* indicated that, as we would expect, hierarchical level or position was related to increased influence. Several more recent studies, however, suggested that the relationship may not be a simple and direct one. For example, the relationship between hierarchical level and control may be mediated by the respondents' line vs. staff assignment, by pay

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*The numbers of the bibliography abstracts are: 1023, 1033, 1057, 1062, 1073, 1085, 1087, 1098, 1103, 1105, 1119, 1132, 1139, 1161, 1196, 1197, 1198, 1199, 1200, 1205, 1212, 1216, 1238, 1255, 1262, 1274, 5000, 5002, 5004, 5005, 5010, 5011, 5015, 5021, 5029, 5031, 5040, 5041, 5050, 8021, 8028.

associated with hierarchical level, or by the respondents' degree of expert knowledge or ability.

Control and Influence, and Organizational Reward Structure. Ten* of the 26 studies listed as including both the criterion measure, control and influence, and the correlate measure, reward structure, actually reported relationships between them. Examination of these studies suggests that they can be divided into those concerning pay systems for workers and those concerning pay scales for management. Most workers' pay systems (piece work to pooled group pay) have been shown associated with low worker authority. For managers, on the other hand, higher pay scales for the same hierarchical levels were found associated with greater autonomy and independence.

Technology and Control and Influence. Of the 34 studies that included both control and influence as a QWL criterion variable and technology as a correlate, 28** studies also reported associations between these two variables. Although a few recent references specify some contingencies and conditions for the association between technological characteristics and control at the workplace, most of the studies reported more simplex analyses. The studies can be divided into those which looked at differences between craft, mass production (industrial), and automated, or continuous process (post industrial) technologies; and those which looked at more specific technological characteristics such as predictability of work, complexity, specialization of functions, and the like. For the first set of studies, 7

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*The numbers of the bibliography abstracts are: 1011, 1021, 1139, 1255, 5002, 5006, 5009, 5025, 5028, 5041.

**The numbers of the bibliography abstracts are: 1040, 1063, 1091, 1158, 1164, 1165, 1212, 1214, 1226, 1238, 1239, 1240, 1245, 1250, 1251, 1262, 5004, 5010, 5029, 5032, 5045, 5046, 5048, 5049, 5051, 8006, 8012, 8013.

reported post-industrial technology associated with greater control and discretion, and 3 reported the reverse; for industrial technology, 2 studies reported low degree of control and influence. Four studies of craft technology reported considerable discretion. For the other sorts of investigations, functional specialization is consistently shown related to high management control, as is predictability and complexity in technological measurements.

Extra-work Activities and Technology. Extra-work activities were seldom consistently related to anything, although the typical criteria correlate measures of job type and personality were found relatively frequently, as were organizational characteristics such as age, size, location, and the like. Workplace characteristics, job demands, technology, and time conditions were found to be related to extra-work activities to some slight extent, in the few cases revealed by the literature search.

A more careful examination of the particular association between technology and extra-work activities showed that a surprising proportion of the studies concerned with technology as a causal variable also considered some extra-work activity as an outcome. Aside from this general finding, however, there was little consistency among the studies* involved, aside from our observation that most of the studies reported that technology either operated through or in conjunction with other variables (such as skill classifications or the necessity for shift work) rather than alone or directly on extra-work activities.

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*The numbers of the bibliography abstracts are: 1010, 1014, 1063, 1064, 1091, 1158, 1214, 1262, 5004, 5010, 5014, 5029, 5048, 8820.

VI. RECOMMENDATIONS

A. Evaluation

The first comment that must be made about the literature on the quality of working life published during the past fifteen years is that it is not systematic, it is not very rich from the standpoint of new directions, and it contains few surprises.

Basically, the bibliographic search and review confirmed that little research has been done in which the individual is the central concern, except perhaps for research that applies the standards of job satisfaction measures, which was not reviewed in the present effort.

As reported above, some 365 studies are reported in the annotated bibliography. Although the bibliography does not encompass all relevant studies, it does nonetheless cover the vast majority of those concerning QWL criteria which were to be found in the published journals and books and the unpublished reports and cases which were scanned during the annotation process -- sources that must cover the majority of such studies in the English-language literature. The research that has been published in the past fifteen years reflects a growing balance of concern between the traditional quality of working life parameters (wages, hours, and working conditions) and the more contemporary issues of self-esteem and actualization. Interest in control and influence as an important dimension of the quality of working life has apparently remained high throughout the period.

Management and organizational concerns have been reasonably well served by studies relevant to motivation, subsumed in the bibliography under "organizational enclosure." By contrast, the more societally

relevant dimensions -- work-related effects on employees' extra-work life roles -- have been studied very little but are coming into prominance.

Overall, the gross frequency measures presented in Figure 1 reveal a large number of studies dealing with economic security and human relations concerns of the social working environment. Studies examining (at least tangentially) self-esteem and actualization, control and influence, and alienation also are numerous, and these measures are more representative of the quality of working life as, it appears, it is becoming defined.

A review of the characteristics causal to the quality of working life confirms the suspicion that, in the fifteen years of research reviewed, a great deal of effort has been devoted to investigating the characteristics of workers and organizations, whereas little research has investigated work groups or technology variables as they relate to the quality of working life. It is to the credit of social sciences research during that period, however, that a relatively large number of studies have investigated job demands, as well as job types in general.

Increasingly, the most recent theoretical literature on the quality of working life has emphasized the importance of job and organizational structure and the necessity for redesigning both to enhance quality of working life.*

We can therefore report that the variable, job demands, has recently become important, perhaps as a function of Herzberg's ideas of job

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*c.f. Work in America, Report of a Special Task Force to the Secretary, Health, Education, and Welfare (Cambridge: MIT Press, 1973; and The Changing World of Work, Report of the 43rd American Assembly, November 1 - 4, 1973, Arden House, Harriman, New York.

enrichment. Of the rather large number of studies in the bibliography which deal with job demands and alienation, for example, a good number (about half) tend to report a particular pattern of findings that can be diagrammed as "alienation=job dissatisfaction=job context." The other half, dating from somewhat later in the period studied here, tend to report a different pattern: "alienation=absence and turnover=job content." Both job content and context are doubtless important, and the descrepancies in the literature may perhaps best be seen as a shift in the dependent variable, rather than as a theoretical inconsistency. It is important to note, however, that the shift in emphasis is from job context to job content.

Other studies reported in the bibliography show increasing support for the idea of mediating or contingency variables operating between causal variables and quality of working life parameters. For example, the relationship between hierarchical level and degree of influence may be mediated by such things as line vs. staff assignment, amount of pay, and degree of expert knowledge.

Substantive Assessment and the Bibliography. The bibliography, to be useful, should provide the user with substantive information regarding what correlates in particular were found related to certain QWL criteria. A sample of such findings has been reported above. A primary purpose of the present paper, however, has been to familiarize the reader with some of the problems of evaluating and measuring QWL -- and to present one manner of doing so which would permit cutting into a bewildering and diverse array of literature for purposes of examining it. Another purpose has been to report where social science is today with regard to what has been measured (and to how frequently, when, and

where it was reported). The purpose of the present paper has not been to undertake a substantive analysis of all relationships extant in the literature reviewed.

The bibliography was created as a source document, hopefully to be used by individual investigators as a way of generating their own analyses of criteria and correlates of interest to them, setting their own levels of what they considered to be quality for those particular criteria. The indexing system in the bibliography was designed with that use in mind. Therefore, if we were to map in some meaningful, substantive way the entirety of quality of working life as represented by the assembly of annotated abstracts in the bibliography, we would violate the spirit of investigation at this early stage. In the first place, such a substantive review would require vast resources in data processing and data analysis. But this constraint of resource availability pales before the more important question of priorities in the use of those resources.

To the degree that the reader questions the particular choice of QWL criteria as used in the present document and in the bibliography he or she is a party to this second constraint. The bibliography was created to help us to identify what has been done, and done well, and as an aid in identifying what to do next. This step was taken in the face of considerable disagreement among concerned social scientists about what constitutes QWL to begin with. It is our feeling that further analysis of what do we know "substantively" about QWL is fruitless unless and until social science can agree on what is to be assessed. Together, the criteria in the bibliography were purposely chosen to be as broad and encompassing as possible; and at the same time,

as individual measures, not to be shot through with "rights" and "wrongs" of value statements or attitudes. Hopefully, the individual user of the bibliography could examine and assess these criteria as being good or bad, right or wrong, at whatever level he or she chooses. Thus, an analysis of substance which purports to take all data on all criteria at once would make little sense to most readers at this time. There is simply little or no agreement as to what constitutes the quality of working life and at what level quality obtains.

B. Measurement.

The research design for the bibliography was such that now it is very difficult to offer in the present paper comprehensive assessment of the quality of research or adequacy of measures employed in the studies reviewed. First, although quality of research was a consideration in selecting studies for the bibliography, the prime criterion was simply that a study reported some empirical or quantifiable measurement of our eleven criteria for quality of working life and that these were associated with some other variable. Second, although we were interested in method and tried to select for valid method and measures, our design called for superimposing our eleven criteria upon whatever measures were used in the studies we abstracted. Therefore, it is impossible at this point to draw from our bibliographic abstracts any meaningful generalizations about the quality of the measures used in the original studies.

A flaw in our design may well have been that it did not provide a reliable means for an overall evaluation of the measures used in past research. We have attempted, however, in the bibliography to increase

the collective value of the measures reported in the studies we abstracted by combining their numerous and varied criteria into eleven major parameters of quality of working life. We have been able to conclude, however, that much of the potential value of past experimentation as a guide for future action is lost because of the inadequacies of the measures used in past research, not because the quality of research is low but because social scientists have not made explicit attempts to create any standardized measures for either the outcomes or the causes of quality of working life.

The point of view of the individual of the quality of working life is coming into its own. The measures of alienation, self-esteem, self-actualization, and influence are neither standardized nor consistent, and the results of relationships with them are inconsistent. But the number of studies in this area is doubling every five years, and the consistency of results is increasing. This consistency is obscured somewhat by a shift from more simplex causal models to the use of mediating and conditioning variables in more complex models. Of the major trends in the area of quality of working life for the individual, increased interest in investigating job characteristics and job demands, and renewed interest in workgroup dynamics, loom large.

From the standpoint of quality of working life for the organization, the characteristics or parameters of organizational motivation or enclosure appear to be suitably measured and seem to be related to many of the same causal or correlate variables as are the other quality of working life characteristics. Such causal variables are organizational climate and hierarchy, organizational reward structure, the type and demands of organizational and job characteristics, supervisory

characteristics, work groups, status and prestige, and technology, as well as some member characteristics (age and job tenure). Personality, needs and expectations, and personal experiences are also important in relation to the organizational enclosure measures.

Research on quality of working life from a societal point of view has been especially scant, except for some studies done in Europe, especially in Scandinavia. The research undertaken in the United States and reported in English-language journals virtually ignores the relationships between work and extra-work characteristics, behavior, activities, and attitudes.

Finally, few of the studies reported in the bibliography are case studies. Of such case studies, most were unpublished manuscripts that were abstracted for the bibliography; most of them became available during 1971 and 1972. The paucity of case studies is indicative of the sort of quantitative research reported in the journals we examined for the purposes of the bibliography; and examination of other journals probably would not have yielded much more, since such reports are virtually unavailable at present. The Department of Labor, 'ASPER' Research Program* and the Task Force on Comparability of the Quality of Working Life Conference both have emphasized the need for case studies using standardized measurement and evaluation. Until that need is met, there will be only limited improvement in the state of QWL research. Standardized evaluation in particular is absolutely necessary. There is also a need to examine in cause-and effect case studies or experimental settings some of the characteristics that have been described here in purely statistical terms.

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*"The Quality of Employment: Fy 1974 R & D Plan" unpublished draft, March 30, 1973.

Future directions for research on quality of working life should include, first of all, continuations of research on the impact of reorganizing job and work characteristics. Additional case studies should also be carried out and reported in the quantitative literature. There still remains, however, a need for additional static (as well as longitudinal), comparative studies using large numbers of respondents. Case studies must be undertaken in which specific changes are made with an eye to evaluating certain characteristics. Finally, the analysis of such studies should include a rather standardized list of what might be components of quality of working life, and an attempt should be made to measure these in some quantitative (i.e., frequency) sense. The data reviewed here from the annotated bibliography on the quality of working life suggest that such measures can be and have been undertaken. Importance is the standardization of the measures; and the creation of behavioral measurement wherever satisfaction or attitudinal measurement alone is currently available. If that is done, it will provide not only added strength in evaluation of case studies but, more urgently needed, a base of common definitions. At this stage, we appear to be willing to talk to one another about quality of working life and what it is. We should continue the dialogue, because although experiencing it is better than talking about quality of working life, talking about it is better than nothing.